VERSION WITH MARKINGS TO SHOW CHANGES MADE:

On page 7, the full paragraph beginning with "Figure 4B:"

FIGURE 4B: Binding of hPot1p to human C-strand (SEQ ID NO: 19) $(CCCTAA)_5$, G-strand (SEQ ID NO: 20) $(TTAGGG)_5$ and duplex (SEQ ID NO: 21) $(CCCTAA)_5 \bullet (TTAGGG)_5$. Binding conditions and analysis were as described in FIGURE 3.

On page 8, the full paragraph beginning with "Figure 6."

FIGURE 6: Inhibition of telomerase activity by Pot1p. Telomerase activity is assayed with telomeric primer PBoli82 (SEQ ID NO: 22) (TGTGGTGTGTGGGTGTGC) as described in Haering *et al.*, *Proc. Nat'l Acad. Sci. USA* 97: 6367-72, 2000. Unlabeled nucleotides are added to a concentration of 100 μM as follows: lanes a and b, dATP, dCTP and dTTP; lanes c and d, ddATP, dCTP and dTTP; lanes e and f, dATP, dCTP and ddTTP. For lanes b, d, and f the oligonucleotide was preincubated with a SpPot1p preparation containing full length protein and the N-terminal 22 kDa fragment (100 ng/μl). The Pot1 protein inhibits primer extension by telomerase.

On page 14, the entire Table 1:

TABLE I

SpPot1p-binding oligonucleotides:

(SEQ ID NOS 23-35, respectively, in order of appearance)

PBoli52	GGT TAC GGT TAC AGG TTA CA
PBoli53	CGG TTA CAC GGT TAC AGG T
PBoli54	GTT ACA GGT TAC GGT TAC GG
PBoli86	TGT GGT GTG TGG GTG TGC GGT T
PBoli110	GGT TAC ACG GTT ACA GGT TAC AGG TTA CAG
PBoli112	GGT TAC ACG GTT ACA GGT TAC AGG TTA CAG GGT TAC

	GGT TAC G
PBoli183	CTG TAA GCA TAT CAT CAT TCG A GGT TAC
PBoli184	GGT TAC GCA TAT CAT CAT TCG A ATC TCG
PBoli185	CTG TAA GCA TAT CAT CGG TTA CGG TTA C
PBoli186	GGT TAC GGT TAC CAT CAT TCG A ATC TCG
PBoli187	CTG TAA GCA TAT GGT TAC TCG A ATC TCG
PBoli188	CTG TAA GC GGT TAC GGT TAC GA ATC TCG
PT1	GGT TAC AGG TTA CAG GTT AC

hPot1p-binding oligonucleotides:

(SEQ ID NOS 36-38, respectively, in order of appearance)

PBoli177	TTA GGG TTA GGG TTA GGG TT
PBoli178	GG TTA GGG TTA GGG TTA GGG
PBoli179	TTA GGG TTA GGG TTA GGG TTA GGG TTA GGG

On page 21, the first full paragraph:

Specific splicing variants encompassed by the invention are shown in the Figures. The *SpPOT1* gene, for example, has two introns, which normally are spliced from the mature transcript. However, in one splicing variant, intron 2 may not be spliced, so that it is included in the mature transcript (SEQ ID NO:10). Because the intron does not contain a stop codon, the splicing variant mRNA gives rise to a somewhat larger polypeptide (compare SEQ ID NO:9 and 11). When intron 1 is not spliced out, however, the resulting protein is truncated as a result of a stop codon within intron 1. The resulting peptide has the sequence: (SEQ ID NO: 39) M G E D V I D S L Q L N E L L N A G E Y K I G V R Y Q W I Y I C F A N N E K G T Y I S V H. Alternatively, translational frame shifting may lead to a significantly larger protein product. Translational frame shifting has been observed in a number of proteins involved in telomere metabolism. Aigner *et al.*, *EMBO J.* 19: 6230-39, 2000. Polypeptides resulting from translational frame shifting also are considered "splicing variants" for the purposes of the invention.

On page 43, the last full paragraph beginning with "*Example 2" and* continuing on to page 44:

C-strand (CGTAACCGTAACCCTGTAACCTGTAACCTGTAACCGTGTAACC) (SEQ ID NO: 40) and G-strand (GGTTACACGGTTACAGGTTACAGGTTACAG-GGTTACGGTTACG) (SEQ ID NO: 28) were 5′ ^{32}P-labeled using T4 polynucleotide kinase and γ-^{32}P-ATP. Duplex DNA was generated by annealing equimolar amounts of radiolabeled C-strand and unlabelled G-strand. Binding reactions (10 µl) were carried out in 25 mM HEPES (pH 7.5), 1 mM EDTA, 50 mM NaCl, 5% glycerol, and 2.5 µM PBoli109 (CCGTAAGCATTTCATTATTGGAATTCGAGCTCGTTTTCGA) (SEQ ID NO: 41) as non-specific competitor. Pot1p (50 ng) was incubated with the indicated DNA substrates (1 ng) for 15 min at 20°C. Complexes were analyzed by electrophoresis at 4°C through a 4-20% TBE gel (Invitrogen) run at 150 V for 80 min. The Pot1p-DNA complex is indicated by an open arrow in FIGURE 3A. FIGURE 3B shows the same experiment except that the added protein (100 ng) contained truncated Pot1p as well as full length protein. Truncated Pot1p-DNA complex is indicated by a closed arrow.

On page 44 the last full paragraph beginning with "*Example 4"* and continuing on to page 45:

Example 4: Cloning of the hPOT1 gene.

Oligos PBoli164T (SEQ ID NO: 42) (TTCAGATGTTATCTGTCAATCAGAACCTG) and PBoli194B (SEQ ID NO: 43) (GAACACTGTTTACATCCATAGTGATGTATTGTTCC) were used to amplify a 614 bp fragment of *hPOT1* from multiple tissue cDNA panels (Clontech) with Advantage 2 Polymerase mix in the buffer supplied by Clontech. Cycling parameters of touch-down PCR were 94°C for 5 s, 68°C for 120 s (32 cycles). The gene encoding glyceraldehyde phosphate dehydrogenase (*GAPDH*) was used as a positive control for the integrity of the cDNA sample and was amplified for 26 cycles with primers (SEQ ID NO: 44) TGAAGG-TCGGAGTCAACGGATTTGGT and (SEQ ID NO: 45) CATGTGGGCCATGAGGTC-CACCAC.